



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,556	10/28/2005	Ali Erdemir	051583-0318	5762
27433 7590 01/08/2009 FOLEY & LARDNER LLP 321 NORTH CLARK STREET SUITE 2800 CHICAGO, IL 60610-4764				
EXAMINER				
GOLOBOY, JAMES C				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
01/08/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/532,556

Applicant(s)

ERDEMIR ET AL.

Examiner

James Goloboy

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24, 30-37, 42-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24, 30-37 and 42-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's amendments filed 10/20/08 overcome the rejections set forth in the office action mailed 8/5/08. New grounds of rejection necessitated by the rejection are set forth below.

Claim Rejections - 35 USC § 103

2. Claims 24, 30, 35, 42, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erdemir in view of Camezind (U.S. Pat. No. 5,433,873).

Erdemir, in column 1 lines 14-16, discloses an improved lubricant prepared from a mixture of boric acid and a base lubricant. In column 2 lines 16-18 Erdemir discloses that the boric acid is preferably present in an amount of 0.05 to 50% by weight, encompassing the range recited in claim 24, and in lines 20-21 discloses that the boric acid has a dimension of 0.1 to 40 microns, overlapping the range require to be considered a nanometer-sized particulate. In column 4 lines 36-38 Erdemir discloses that the boric acid can be added to the base lubricant as a concentrate, meeting the limitations of claim 30. In column 2 lines 12-16, Erdemir discloses that the base lubricant can be a non-aqueous solvent, but does not discloses specific solvents.

Camezind, from column 3 line 43 through column 4 line 29, discloses suitable base lubricant for machining fluids. In column 4 line 22 Camezind discloses polyalkylene glycols, as recited in claims 24 and 35.

It would have been obvious to one of ordinary skill in the art to use the polyalkylene glycols of Camezind as the non-aqueous solvent in the composition of

Erdemir, as Camezind teaches that it is a suitable base lubricant for the case where the composition is to be used as a machining fluid. As the lubricant meets the compositional limitations of claim 42, it must also be stable and odor-free, as recited in the claim, and it is capable of use as a drilling mud, as recited in claim 44.

3. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erdemir in view of Camezind as applied to claims 24, 30, 35, and 42 above, and further in view of Hall.

The discussion of Erdemir in view of Camezind in paragraph 2 above is incorporated here by reference. Erdemir discloses a method including dissolving the boron compound in a solvent before adding to the lubricant.

Hall, in column 2 lines 30-31, discloses that the solubility of boric acid is greatly increased by first dissolving the boric acid in methanol. It there fore would have been obvious to one of ordinary skill in the art to use methanol as the solvent for the concentrate of Erdemir and Camezind, in order to improve the solubility of the boric acid in the lubricant.

4. Claims 32-33 and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erdemir in view of Camezind as applied to claims 24, 30, 35, and 42 above, and further in view of Orozco (U.S. Pat. No. 3,974,674).

The discussion of Erdemir in view of Camezind in paragraph 2 above is incorporated here by reference. Erdemir and Camezind disclose a method of providing

a machining fluid meeting the limitations of claim 24 but do not further disclose the application of the fluid to the metal substrate by the methods recited in claims 32-33 and 36-37.

Orozco, in column 3 lines 14-18, discloses that a metal substrate can be roller-, dip-, or spray-coated with a drawing composition (a type of machining fluid) prior to working. The application of the machining fluid of Erdemir and Camezind to a metal substrate by the methods of Orozco meets the limitations of claim 32, and the use of a spray-coating method meets the limitations of claim 33 as well. The resulting dry film meets the limitations of claims 36-37.

It would have been obvious to one of ordinary skill in the art to coat a metal substrate with the fluid of Erdemir and Camezind by the methods of Orozco, as Orozco teaches that those are suitable ways of coating a metal substrate with a boron-containing forming fluid.

5. Claims 24 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erdemir in view of Klyuchnikov (SU 1810383) and Orozco.

The discussions of Erdemir and Orozco in the above paragraphs are incorporated here by reference. Erdemir and Orozco disclose a method meeting the limitations of claim 34 except for the use of methanol as the machining fluid. As noted in paragraph 2 above, Erdemir discloses that non-aqueous solvents can be used as the base lubricant for the composition.

An English-language abstract of Klyuchnikov, which is attached, has been used in setting forth this rejection. Klyuchnikov discloses a cutting fluid, which is a type of machining fluid, utilizing methanol as a base fluid. The use of methanol as the base lubricant in the method of Erdemir and Orozco meets the limitations of claims 24 and 34.

It would have been obvious to one of ordinary skill in the art to include the methanol of Klyuchnikov as the base lubricant of Erdemir and Orozco, as Klyuchnikov teaches that it is a suitable base lubricant when the composition is to be used as a cutting fluid.

6. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erdemir in view of Trivett (U.S. Pat. No. 5,209,860).

The discussions of Erdemir in the above paragraphs are incorporated here by reference. Erdemir discloses a lubricating composition containing nanometer-sized boron compounds, but does not disclose a method of applying the composition to a substrate using electrostatic methods.

Trivett, in column 10 lines 7-10 and 13-17, discloses the application of a lubricant to a metal substrate via electrostatic spray. It would have been obvious to one of ordinary skill in the art to apply the lubricant of Erdemir to a metal substrate by electrostatic spray, as Trivett teaches that it is a suitable method for applying a viscous liquid such as the lubricant of Erdemir.

Response to Arguments

7. Applicant's arguments have been considered but are moot in view of the new grounds of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Goloboy whose telephone number is (571)272-2476. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCG

/Glenn A Caldarola/
Acting SPE of Art Unit 1797